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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,127	10/22/2001	Wolfgang Schonberger	A-2986	7101

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EXAMINER

HINZE, LEO T

ART UNIT	PAPER NUMBER
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2854

DATE MAILED: 09/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

10/033,127

Applicant(s)

SCHONBERGER, WOLFGANG

Examiner

Leo T. Hinze

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-10 and 12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-10 and 12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 7-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeschke et al., US 4,089,264 (Jeschke) in view of Dini, US 3,964,386 (Dini), Dudley, US 1,798,147 (Dudley) and Konrad et al., US 2002/0014171 A1 (Konrad).

a. Regarding claims 1 and 10:

Jeschke teaches a zone-less inking unit (Figure 1)/printing press (col. 1, ll. 1-2) in a printing press, comprising an ink-metering device (1, Fig. 1) having at least one metering element (6, Fig. 1) operatively engaging with a roller (2, Fig. 1), said roller being one of an ink form roller and a roller operatively engaging with an ink form roller, said ink-metering device producing only an ink pattern being even over a print width of said roller, and an oscillation device (11,13, Fig. 1) assigned to said metering element for mounting said metering element so that it is oscillatable between: an engaging position and a spaced-away position with respect to the metering element; and a spaced-away position of said metering element in which said

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metering element is lifted to an outlet height wherein said metering element is lifted to an outlet height (col. 4, ll. 1-15) from said roller. The device of Jeschke will produce an ink pattern that corresponds to the ink pattern data that it is input, so if Jeschke is only given data that defines an ink pattern being even over a print width of said roller, that is the only ink pattern Jeschke will print.

Jeschke does not teach an outlet height of at least 20 micrometers and less than 40 micrometers; a plurality of glazing rollers disposed downline from said metering element along a peripheral line of said roller, said glazing rollers having one of a rubber-elastic peripheral surface and an elastomeric peripheral surface, each of said glazing rollers being in rolling contact exclusively with said roller.

Dini teaches a method and apparatus for removing surplus ink on printing cylinders, including: an oscillating metering element (3, Fig. 4); an oscillation frequency in the range of 5 to 200 kHz (col. 2, ll. 45-47); an oscillation amplitude from 5 to 30 micrometers (col. 2, ll. 52-53); that such an oscillation frequency is advantageous for creating a hydrodynamic barrier in the ink layer which blocks passage of all but a predetermined residual portion of the ink layer past the doctor blade edge (col. 1, ll. 64-68); the invention is applicable to any situation where it is desired to control the thickness of a liquid layer applied to a surface (col. 4, ll. 62-64); the invention is advantageous for eliminating uneven wiping off of surplus ink due to non-uniform coordination of the positions of the doctor blade and the cylinder (col. 1, ll. 34-37) and in eliminating inconsistency of tone reproduction of printings (col. 1, ll. 45-47).

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It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Jeschke to change the oscillation amplitude to 5-30 micrometers, because Dini teaches that this oscillation amplitude is advantageous for eliminating uneven wiping of surplus ink due to non-uniform coordination of the positions of the doctor blade and the cylinder and in eliminating inconsistency of some reproduction of printings, and such an oscillation amplitude creates a hydrodynamic barrier in the ink layer which blocks passage of all but a predetermined residual portion of the ink layer past the doctor blade edge.

Dudley teaches an ink-metering device including a metering element (15, Fig. 1) operatively engaging with a roller (14, Fig. 1), and a plurality of glazing rollers (16, Fig. 1) disposed downline from said metering element, each of said glazing rollers being in rolling contact exclusively with said roller. A problem in printing is obtaining proper ink distribution, and it is essential to apply an exceedingly evenly distributed, thin film of ink to the form of the press (p. 1, ll. 14-20). The glazing rollers assure the best possible distribution of ink on the drum (p. 1, ll. 60-62). Dudley is silent as to the material used on the surface of the glazing rollers.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to additionally modify Jeschke to include a plurality of glazing rollers disposed downline from said metering element along a peripheral line of said roller, each of said glazing rollers being in rolling contact exclusively with said roller, because Dudley teaches that it is important to apply an exceedingly evenly distributed, thin film of ink to the form, and glazing rollers help assure the best possible distribution of ink on the drum.

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Konrad teaches a short inking unit with a rider roller (5, Fig. 4) with an outer peripheral surface of silicone rubber (¶ 0050), a material which does not promote adhesion of ink, thereby preventing splitting of the ink layer onto the glazing roller.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to additionally modify Jeschke wherein the glazing rollers having a rubber-elastic peripheral surface, because Konrad teaches that a silicone-rubber surface is advantageous for preventing ink from collecting on the glazing roller, thereby preventing splitting of the ink layer onto the glazing roller.

b. Regarding claim 2, the combination of Jeschke, Dini, Dudley and Konrad substantially teaches all that is claimed as discussed in the rejection of claim 1 above. Jeschke also teaches wherein said roller has a radial direction; and said oscillation device has a guide guiding said metering element in an oscillation direction deviating in a range from 0° to 20° in said radial direction of said roller (blade 6 moves essentially perpendicular to roller 2, Fig. 1).

c. Regarding claim 3, the combination of Jeschke, Dini, Dudley and Konrad substantially teaches all that is claimed as discussed in the rejection of claim 1 above. Jeschke also teaches an inking unit wherein said oscillation device has an electromagnetic (11, 13, Fig. 1; “electromagnet,” col. 3, line 51) oscillation drive drivingly connected to said metering element.

d. Regarding claim 4, the combination of Jeschke, Dini, Dudley and Konrad substantially teaches all that is claimed as discussed in the rejection of claim 1 above. Jeschke also teaches an inking unit wherein said oscillation device has a spring (15, Fig. 1) for setting said metering element against said roller.

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e. Regarding claim 7, the combination of Jeschke, Dini, Dudley and Konrad substantially teaches all that is claimed as discussed in the rejection of claim 1 above. Jeschke also teaches an ink-feeding device (8, Fig. 1) disposed upline of said metering element alongside a peripheral line of said roller.

f. Regarding claim 8, the combination of Jeschke, Dini, Dudley and Konrad substantially teaches all that is claimed as discussed in the rejection of claim 1 above. Jeschke also teaches an inking unit including at least another metering element assigned to said roller (9, Fig. 2).

g. Regarding claim 9, the combination of Jeschke, Dini, Dudley and Konrad substantially teaches all that is claimed as discussed in the rejection of claim 1 above. Jeschke also teaches an inking unit wherein said metering elements are mounted alternately with one another for removal thereof from said roller (9, Fig. 2).

h. Regarding claim 12:

Jeschke teaches a zone-less inking unit (Figure 1)/printing press (col. 1, ll. 1-2) in a printing press, comprising an ink-metering device (1, Fig. 1) having at least one metering element (6, Fig. 1) operatively engaging with a roller (2, Fig. 1), said roller being one of an ink form roller and a roller operatively engaging with an ink form roller, said ink-metering device producing only an ink pattern being even over a print width of said roller, and an oscillation device (11,13, Fig. 1) assigned to said metering element for mounting said metering element so that it is oscillatable between: an engaging position and a spaced-away position with respect to the metering element; and a spaced-away position of said metering element in which said metering element is lifted to an outlet height wherein said metering element is lifted to an outlet

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height (col. 4, ll. 1-15) from said roller. The device of Jeschke will produce an ink pattern that corresponds to the data that it is given, so if Jeschke is only given data that defines an ink pattern being even over a print width of said roller, that is the only ink pattern Jeschke will print.

Jeschke does not teach an outlet height of at least 20 micrometers and less than 40 micrometers; a plurality of glazing rollers disposed downline from said metering element along a peripheral line of said roller, said glazing rollers having one of a rubber-elastic peripheral surface and an elastomeric peripheral surface, each of said glazing rollers being in rolling contact exclusively with said roller; oscillation at a frequency within a range of 200 Hz to 10 kHz.

Dini teaches a method and apparatus for removing surplus ink on printing cylinders, including: an oscillating metering element (3, Fig. 4); an oscillation frequency in the range of 5 to 200 kHz (col. 2, ll. 45-47); an oscillation amplitude from 5 to 30 micrometers (col. 2, ll. 52-53); that such an oscillation frequency is advantageous for creating a hydrodynamic barrier in the ink layer which blocks passage of all but a predetermined residual portion of the ink layer past the doctor blade edge (col. 1, ll. 64-68); the invention is applicable to any situation where it is desired to control the thickness of a liquid layer applied to a surface (col. 4, ll. 62-64); the invention is advantageous for eliminating uneven wiping off of surplus ink due to non-uniform coordination of the positions of the doctor blade and the cylinder (col. 1, ll. 34-37) and in eliminating inconsistency of some reproduction of printings (col. 1, ll. 45-47).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Jeschke to change the oscillation amplitude to 5-30 micrometers, because Dini teaches that this oscillation amplitude is advantageous for eliminating uneven

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wiping off of surplus ink due to non-uniform coordination of the positions of the doctor blade and the cylinder and in eliminating inconsistency of tone reproduction of printings, and such an oscillation amplitude creates a hydrodynamic barrier in the ink layer which blocks passage of all but a predetermined residual portion of the ink layer past the doctor blade edge.

It would have been obvious to a person having ordinary skill in the art to modify Jeschke to have an oscillation frequency within a range of 200 Hz to 10kHz, because Dini teaches that such an oscillation frequency is advantageous for eliminating uneven wiping off of surplus ink due to non-uniform coordination of the positions of the doctor blade and the cylinder and in eliminating inconsistency of tone reproduction of printings.

Dudley teaches an ink-metering device including a metering element (15, Fig. 1) operatively engaging with a roller (14, Fig. 1), and a plurality of glazing rollers (16, Fig. 1) disposed downline from said metering element, each of said glazing rollers being in rolling contact exclusively with said roller. The glazing rollers assure the best possible distribution of ink on the drum (p. 1, ll. 60-62).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to additionally modify Jeschke to include a plurality of glazing rollers disposed downline from said metering element along a peripheral line of said roller, each of said glazing rollers being in rolling contact exclusively with said roller, because Dudley teaches that glazing rollers assure the best possible distribution of ink on the drum.

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Konrad teaches a short inking unit with a rider roller (5, Fig. 4) with an outer peripheral surface of silicone rubber (¶ 0050), a material which does not promote adhesion of ink, thereby preventing splitting of the ink layer onto the glazing roller.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to additionally modify Jeschke wherein the glazing rollers having a rubber-elastic peripheral surface, because Konrad teaches that a silicone-rubber surface is advantageous for preventing ink from collecting on the glazing roller, thereby preventing splitting of the ink layer onto the glazing roller.

3. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jeschke in view of Dini, Dudley and Konrad as applied to claim 1 above, and further in view of Cappel et al., US 3,913,479 (Cappel).

The combination of Jeschke, Dini, Dudley and Konrad teaches all that is claimed as discussed in the rejection of claim 1 above, including wherein said metering element is a metering blade having a working region terminating in a cutting edge (Jeschke, 7, Fig. 1).

The combination of Jeschke, Dini, Dudley and Konrad does not teach said working region of said metering blade having a cross section thickness which remains constant.

Cappel teaches wherein said metering element is a metering blade (75, Fig. 1) having a working region terminating in a cutting edge, said working region of said metering blade having a cross-section thickness which remains constant (Fig. 3). Cappel teaches that such a blade as part of the system is advantageous for reducing construction costs and for operating for long periods substantially free of maintenance problems (col. 1, ll. 38-43).

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It would have been obvious to a person having ordinary skill in the art at the time the invention was made to further modify Jeschke wherein said working region of said metering blade has a cross-section thickness that remains constant, because Cappel teaches that such a metering blade is advantageous for reducing construction costs and for operating for long periods substantially free of maintenance problems.

Response to Arguments

4. Applicant's arguments filed 29 June 2005 have been fully considered but they are not persuasive.

5. Regarding applicant's argument on p. 8 that the term "only" should be interpreted to mean that the ink metering device is not capable of generating an uneven ink profile, the examiner instead gives "only" a broader reasonable interpretation. Given that the limitation "producing only an ink pattern being even over a print width", for example in ll. 6-7 of claim 1, is a functional limitation in an apparatus claim and does not serve to further limit the structure of the apparatus, the examiner's position is that any apparatus with an operating mode which produces "only an ink pattern being even over a print width" would anticipate that limitation. As discussed in the rejection of claims 1, 10 and 12 above, Jeschke produces only an ink pattern being even over a print width of said roller if the input data that sets the position of the metering elements specifies that each of the elements produce the same ink pattern. See MPEP § 2114. Further supporting the examiner's position is the limitation "at least one metering element" in line 3. The possible inclusion of more than one metering element in the claimed device would appear to contradict applicant's argument that the claimed device is not capable of generating an

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uneven ink pattern, because the existence of more than one metering element implies that each metering element would produce an ink pattern dissimilar from each other metering element.

6. Regarding applicant's argument on pp. 9-10 that "zone-less" in the preamble of claims 1, 10 and 12 necessarily precludes Jeschke from anticipating any of the elements of claims 1, 12 and 12 because Jeschke teaches inking zones, the examiner does not consider "zone-less" to be a structural limitation, because the body of the claims fully and intrinsically set forth all of the limitations of the claimed invention, and the preamble merely states, for example, the purpose or intended use of the invention, rather than any distinct definition of any of the claimed invention's limitations. See MPEP § 2111.02. The examiner's position is further supported by the limitation "at least one metering element" in line 3 of each claim, because the possible inclusion of more than one metering element would imply the existence of zones.

7. Regarding applicant's arguments on pp. 11-13 that Dudley teaches away from the claimed invention and can not be properly combined, the examiner disagrees. As discussed in the rejections above, Dudley teaches a principle problem in the art of printing is that of obtaining proper in distribution, and that it is essential to apply an exceedingly evenly distributed, thin film of ink to the form of the press (p. 1, ll. 14-19). Dudley includes rider rollers 16 "in order to distribute the ink" (p. 1, ll. 57-58). Dudley further teaches that the rollers could be suitably rearranged (p. 2, ll. 27-28). A person having ordinary skill in the art, upon reading those teachings of Dudley, would be motivated to add rider rollers in the ink train to help distribute the ink. It is doubtful that a person having ordinary skill in the art would, as applicant implies, simply abandon any attempt to provide an evenly distributed, thin film of ink with the help of

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rider rollers only because the ink train did not exactly match the configuration of rollers shown in the preferred embodiment of Dudley.

a. Regarding applicant's assertion on p. 13 that Dudley teaches away from the claimed invention, there is no teaching in Dudley explaining why placing rider rollers at other locations in the ink train would be detrimental.

b. Regarding applicant's argument on p. 12 that the ink rollers must have a specific spatial relationship with the printing form, no printing form is claimed in claims 1, 10 or 12. While claims should be read in light of the specification, limitations appearing in the specification but not in the claims should not be read into the claims. See MPEP § 2111.

8. Regarding applicant's argument on p. 17 that Konrad teaches away from the proposed combination, the examiner is not relying on Konrad's specific teaching of the inking train configuration. Instead, the examiner is relying on Konrad's teaching that certain materials of construction are advantageous for rider rollers, as discussed in the rejections above.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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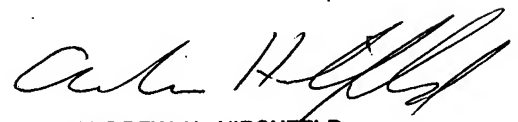
the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leo T. Hinze whose telephone number is (571) 272-2167. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Leo T. Hinze
Patent Examiner
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09 September 2005


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